# Dossier: INVERSION SPACE CO

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,699,630.00

**Award Date:** 2023-03-07

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Inversion Space Co. is a US-based company focused on developing and deploying spacecraft capable of providing on-demand reentry services for a variety of applications, including in-space manufacturing, pharmaceutical production, advanced materials research, and national security payloads. Their core mission is to unlock the potential of low Earth orbit (LEO) by providing a reliable and affordable return transportation system, addressing the current lack of accessible reentry capabilities and the associated limitations on utilizing the unique microgravity environment of space. Their unique value proposition lies in offering a commercially viable, reusable spacecraft designed for rapid turnaround and precise return, enabling a streamlined process for retrieving high-value products and research samples from space.

**Technology Focus:**

* Developing "Ray," a small, reusable spacecraft designed for on-demand reentry from LEO. "Ray" is targeting a payload capacity of up to 30kg and a reentry precision of within 10 meters.
* Implementing advanced thermal protection systems (TPS) to enable multiple reentries and rapid refurbishment cycles. They aim to demonstrate a turnaround time of less than 6 months between missions.

**Recent Developments & Traction:**

* In December 2023, Inversion Space secured a $15 million Series A funding round led by Spark Capital, with participation from Y Combinator, Soma Capital, and Liquid 2 Ventures. The funding is earmarked for accelerating the development and testing of its "Ray" spacecraft.
* Announced a partnership with the U.S. Space Force in 2022 through the AFWERX program to explore the potential of on-demand reentry for national security applications.
* Successfully completed several key engineering milestones, including preliminary design review (PDR) and critical design review (CDR) for key subsystems of the "Ray" spacecraft.

**Leadership & Team:**

* Austin Briggs (Co-founder and CEO): Previously held engineering roles at SpaceX, focusing on launch vehicle development.
* Justin Fiaschetti (Co-founder and CTO): Previously held roles at Bell Flight, leading engineering efforts on advanced rotorcraft systems.

**Competitive Landscape:**

* Sierra Space (Dream Chaser): While Dream Chaser is larger and designed for cargo delivery to the ISS, it offers a similar reusable reentry capability. Inversion's focus on smaller payloads and rapid turnaround differentiates it.
* Varda Space Industries: Varda is focused on in-space manufacturing and intends to return product to earth, competing for the same customers who want the ability to bring products back to Earth. Inversion Space's strength is that they are solely focused on the logistics of returning products, and could service many customers including Varda.

**Sources:**

1. [https://www.inversionspace.com/](https://www.inversionspace.com/)

2. [https://techcrunch.com/2023/12/13/inversion-space-raises-15m-to-offer-affordable-on-demand-reentry/](https://techcrunch.com/2023/12/13/inversion-space-raises-15m-to-offer-affordable-on-demand-reentry/)

3. [https://www.ycombinator.com/companies/inversion-space](https://www.ycombinator.com/companies/inversion-space)

4. [https://spacenews.com/afwerx-awards-contracts-for-orbital-transfer-and-reentry-vehicles/](https://spacenews.com/afwerx-awards-contracts-for-orbital-transfer-and-reentry-vehicles/)